

C ~~Amended~~  
picogram/mm<sup>2</sup>.

A marked up version of the amendment to claim 23 is enclosed herewith.

Please add claims 26 to 30 as follows:

26. A method of measuring the concentration of particles in a solution, the method comprising:

depositing a measured quantity of the solution on a sensor having a membrane layer;

allowing the solution to evaporate until the particles remain on the membrane layer;

driving the membrane layer at a reference resonant frequency;

detecting the shift in frequency of the membrane layer due to the mass of the particles;

determining the mass of the particles based on the shift in frequency;

and

based on the measured quantity of the solution and the mass of the particles, automatically calculating the concentration of the particles in the solution.

27. A method of measuring the concentration of particles in a solution, the method comprising:

depositing a measured quantity of the solution on a flexural plate wave device;

allowing the solution to evaporate until the particles remain on the

flexural plate wave device;

driving the flexural plate wave device at a reference resonant frequency;

detecting the shift in frequency of the flexural plate wave device due to the mass of the particles;

determining the mass of the particles from the shift in frequency; and

based on the measured quantity of the solution and the mass of the particles, automatically calculating the concentration of the particles in the solution.

28. A concentration detection system comprising:

a sensor having a membrane layer for receiving a substance thereon;

an oscillator for driving the membrane layer at a reference resonant frequency;

a solution deposition device for delivering a known quantity of a solution containing particles to the membrane layer;

a transducer for detecting the change in frequency of the membrane layer due to the particles after the solution evaporates; and

a processor configured to automatically determine the mass of the particles based on the change in frequency, and to calculate the concentration of the particles in the solution based on the mass of the particles and the quantity of the solution deposited.

29. The system of claim 28 wherein said sensor is a flexural plate wave device.